

**CHAPTER 7:**

**INFECTION CONTROL:  
CLEANING AND  
DISINFECTING**



## **INFECTION CONTROL**

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## **Cleaning and Disinfecting Routines**

Good cleaning and sanitizing practices can prevent outbreaks of illness within your child care centre. Having a proper cleaning schedule for your centre is the first step to ensuring that the cleaning is being done effectively and regularly.

It is the responsibility of everyone working in the child care centre to ensure that the centre and its equipment remain clean and sanitary for the health of both the children and the staff.

## **Legislation**

[Health Protection and Promotion Act](#)  
[Day Nurseries Act](#)

## **Definitions:**

**Cleaning** - The act of cleaning is to remove dirt. The physical action of rubbing of a towel on a surface creates friction, which is needed to remove visible dirt that may be on the surface.

**Disinfection** – The act of disinfecting is to destroy (kill) **most** disease-causing microorganisms on objects or surfaces using high temperatures or chemical solutions. Chemical disinfectants can be classified into three levels (low, intermediate and high-level disinfection) according to the type of product used, their concentrations and contact time. Bleach is a common disinfectant that is very economical and effective however other disinfectants may also be used.

**Sanitizing** - The act of sanitizing involves reducing the number of disease causing microorganisms on the surface of equipment and other objects to acceptable public health levels. The process of sanitizing is to be used following cleaning in a food establishment and mouthed toys in a daycare.

## **Purchasing a Disinfectant**

Here are some helpful tips on what to look for when purchasing a disinfectant:

- Read the label for a description of the product.
- Ingredients to look for in a disinfectant include:
  - chlorine
  - quaternary ammonium
  - 70%-90% isopropyl or ethyl alcohol
  - accelerated hydrogen peroxide
- Determine what type of surfaces the product is designed to disinfect.



- Determine how to use the product; does it require pre mixing or is it used straight from the bottle. If manually diluting, ensure the mixed bottle is properly labeled.
- Look for cautionary statements and warnings on the label.

**Note:** Store all disinfectants and other chemicals in a locked cupboard, out of reach of children and away from food.

### [Day Nursery Cleaning and Disinfecting Schedule](#)

Follow this schedule to ensure you are cleaning all areas of your daycare as is required.



## **How to Prepare a Disinfecting Solution using 5.25% Bleach:**

### **High level disinfection**

- Preparing a 1:10 5.25% Bleach Solution

Ingredients: 50 mL bleach + 450 mL water = 0.5 L of disinfectant

**Use** this strong bleach/water solution to disinfect/decontaminate areas and surfaces following contact with blood or body fluids including fecal matter. This solution must be used on change tables and mats.

### **Low level disinfection**

- Preparing a 1:500 5.25% Bleach Solution

Note: 5 mL = 1 tsp.  
1 L = 4 cups

Ingredients: 5 mL bleach + 2.5 L water or  
2 mL bleach + 1 L water

- Preparing a 1:100 5.25% Bleach Solution

Ingredients: 10 mL to 1 L water

## **Sample Procedure for cleaning blood or bodily fluid accidents**

1. Assemble materials required for dealing with the spill prior to putting on personal protective equipment.
2. Inspect the area around the spill thoroughly for splatters or splashes.
3. Restrict the activity around the spill until the area has been cleaned and disinfected and completely dry.
4. Put on gloves; if there is a possibility of splashing, wear a gown and facial protection (mask and eye protection or face shield).
5. Confine and contain the spill; wipe up any blood or body fluid spills immediately using either disposable towels or a product designed for this purpose. Dispose of materials by placing them into regular waste receptacle.
6. Wash the entire spill area with a soap and water starting from the furthest point (least contaminated) to the centre of contamination (most contaminated).
7. Rinse the area with clean water and removed all gross waste and detergent.
8. Disinfect the cleaned area with a high level disinfectant and allow it to stand for the amount of time recommended by the manufacturer.
9. Wipe up the area again using disposable towels and discard into regular waste.
10. Care must be taken to avoid splashing or generating aerosols during the clean-up.
11. Remove gloves and perform hand hygiene.

**Note:** Always start cleaning and disinfecting surfaces from the area of least contamination to the area of most contamination to confine the spread of disease as much as possible.

### How to Clean and Disinfect Surfaces:

1. Clean all items with soap and water.
2. Rinse with clean, clear water.
3. Apply disinfectant. Follow manufacturer's recommendation for use.
4. A disinfectant is most effective when applied to a clean surface and allowed to be in contact with the surface for a minimum of 10 minutes unless otherwise stated in manufactures direction.
5. Allow to air dry.

There are many methods for applying disinfecting solutions, here are a few suggestions:

- Spray diaper-changing surfaces and potties.
- Use cloths rinsed in disinfecting solution for food preparation areas, large toys, books, puzzles and activities centres.
- Try dipping the object into a container filled with the disinfecting solution for smaller toys.

### Disinfecting in a Child Care Facility:

Level of Disinfection	When to Use	Types of Disinfectants & Active Ingredients	Contact Time
<b>High-Level</b> Kills all bacteria, fungi and viruses	<ul style="list-style-type: none"> <li>• During an outbreak.</li> <li>• Any confirmed case of viral/bacterial infection</li> <li>• Blood spills, vomit, body fluids or fecal contamination</li> <li>• Diaper change area, potty chairs</li> </ul>	<ul style="list-style-type: none"> <li>• Chlorine (1:10 solution)               <ul style="list-style-type: none"> <li>• 5.25% Bleach</li> </ul> </li> </ul>	10 minutes
		<ul style="list-style-type: none"> <li>• 7% Accelerated Hydrogen Peroxide</li> </ul>	10 minutes
		<ul style="list-style-type: none"> <li>• 6% Hydrogen Peroxide</li> </ul>	45 minutes
<b>Low-Level</b> Kills some virus, bacteria and fungi	<ul style="list-style-type: none"> <li>• Floors, walls, washrooms, toys, countertops, tables</li> </ul>	<ul style="list-style-type: none"> <li>• Chlorine (1:500 solution/100 ppm)</li> </ul>	10 minutes
		<ul style="list-style-type: none"> <li>• Chlorine (1:100 solution/500 ppm)               <ul style="list-style-type: none"> <li>• 5.25% Bleach</li> </ul> </li> </ul>	1 minute
		<ul style="list-style-type: none"> <li>• Quaternary ammonia compound</li> </ul>	Follow manufacturer's instructions

### **Remember these Disinfecting Tips:**

- Wash all surfaces with soap and water before disinfecting.
- Make disinfectant fresh daily.



- Label the bottle clearly with the name of the chemical.
- Keep disinfectants out of reach of children.
- Follow the appropriate contact times, as listed above.
- Test all quaternary ammonia and chlorine compounds using the appropriate test strips.

### **Diapering**

Diapering can pose a significant health risk in your child care centre unless extra care is taken with the handling of the soiled diaper and the work surface. Remember the following objectives:

- To prevent the spread of infectious disease among staff, children and their families.
- To provide adequate skincare and comfort to each child.
- To properly store clean diapers and dispose of soiled ones.
- To keep children safe during diapering.
- To avoid cross contamination by keeping diapering area away from food preparation area.

### **Expectations of Operator**

- Establish a procedure for proper diaper changing that includes hand washing, disinfecting the diaper changing surface, and proper disposal of the soiled diaper and wiping material.
- Post diaper changing procedure in the diaper change area.
- Ensure child care centre staff follows proper procedure for diapering.
- Ensure that all hand washing facilities are properly equipped at all times (liquid soap in a dispenser, paper towels and garbage receptacle with a lid).

### **Diaper Change Area**

The diaper change area must be both safe and sanitary for the child. Constant supervision while the child is on the change table is essential. The surface must be such that it can be thoroughly cleaned and disinfected. The surface of the diaper table should be non-porous, smooth and washable. In addition, it should not be quilted or have buttons (buttons and stitching trap germs on the surface, allowing them to enter the inside padding). It is also important to regularly inspect surfaces for rips, tears and pin holes.

A hand sink must be adjacent to each diapering area. The caregiver should wash own hands and the child's hands after the diaper has been changed.

Soiled clothing or **cloth** diapers should not be washed at your centre. Empty the solid material into the toilet, and then place soiled items into a plastic bag to be sent home with the parents.



### **Diaper Change Area Disinfecting Procedure:**

1. Remove visible urine or stool on the surface with a disposable towel or toilet paper and discard.
2. Clean the surface with detergent.
3. Disinfect change table after each use using a high level disinfectant.
4. Clean, disinfect and air dry the diaper pails on a daily basis.

**Note:** A non-absorbent disposable or personal liner can be used to substitute cleaning and disinfecting ONLY when there is no visible contamination or loose stools between successive groups of children. If the liner is visibly soiled or has loose stool, the change mat must be washed and high level disinfected before the next diaper change. The change mat must be washed and disinfected after the changing of the group of children has been completed.

### **Recommended Diaper Change Procedure:**

1. Assemble supplies within easy reach.
2. Wash your hands. Disposable gloves should be worn when a child has diarrhea. Remember gloves are not a substitute for hand washing.
3. Place child on the change table. Remove soiled diaper and fold it inwards.  
**DO NOT LEAVE CHILD UNATTENDED ON TABLE AT ANY TIME.**
4. Clean child's skin with moist disposable wipes. Discard wipes after use.
5. If wearing gloves, discard them now.
6. If applying ointment, use a clean, disposable applicator to obtain ointment from the container.
7. Wash or wipe hands with a clean, moist wipe and discard. Diaper and dress the child.
8. Discard soiled diaper into a plastic-lined receptacle. Double bag soiled clothing for parents. Do not rinse soiled clothing or cloth diapers.
9. Wash your hands and then wash the child's hands. Return child to the play area.
10. Clean and disinfect the diaper change table after each child. Make sure that the entire surface of the change table remains wet for the appropriate contact time.
11. Allow diaper change surface to air dry.
12. Wash your hands.
13. Report any abnormal skin or stool conditions to the parent, such as skin rash, unusual stool consistency, colour, odour or frequency).

**Note:** Soiled clothing or cloth diapers should not be washed at your centre. Empty the solid material into the toilet, and then place soiled items into a plastic bag to be send home with the parents.

## **Bathrooms**

Bathrooms must be cleaned at least once a day. Cleaning includes floors, toilets, hand sinks, countertops, and utility sinks. Use rubber gloves to protect hand from harsh chemicals.

## **Toilets**

- Clean and disinfect once a day and when obviously soiled.
- Toilet seat inserts which maybe used by young children, must be cleaned and disinfected after each use.

## **Potty Chairs**

- Store potty chairs in a place that is not accessible to children unless they are supervised.
- Potty chairs must be cleaned and sanitized after each use.
- Do not use bathroom sink to dispose of potty material or to clean and disinfect potty. Use designated utility sink.
- Potty chairs do not replace the building code requirement for number of toilets in a facility.

## **Toys, Sensory Play Tables, Water Play Tables, Craft Materials and Personal Items**

Play is an essential part of a successful daycare program. Operators must recognize that while beneficial, toys and sensory play equipment can easily become contaminated with germs that can result in illness and outbreaks.

### **Expectations of Operator:**

- Establish and follow a regular cleaning and disinfecting schedule for toys and other play environments. Post the schedule in your centre and ensure all staff is aware of the requirements.
- Use the appropriate cleaners and disinfectants. Verify disinfecting concentrations using the appropriate test strip.
- Store cleaners and disinfectants so that they are clearly labeled and inaccessible to children.
- Store each child's personal items separately.
- Inspect toys regularly and remove any that may pose a hazard or have been recalled.

### **Look for toys that are:**

- Easily cleaned and disinfect.
- Washable.
- Made of non-toxic materials.
- Have smooth edges and no parts that can break off easily.

### **Toy Cleaning and Disinfecting Procedure:**

Refer to the [Daycare Cleaning and Disinfecting Schedule](#) to ensure you are cleaning and disinfecting your toys as often as is required to reduce the transmission of disease.

To clean toys properly follow these simple steps:

1. Using soap, warm water and a scrub brush used only for toy cleaning; scrub the surface of the toy.
2. Rinse the toy in clean, warm water.
3. Apply the appropriate disinfectant or sanitize, ensuring the toy stays wet for the proper contact time.
4. Mouthed toys are recommended to be disinfected with a low level disinfectant.
5. Allow the toy to air dry.
6. Wash your hands.

### **Sensory Play Tables**

Sensory play tables, while a fun activity for children, can also be a source for spreading infections from one child to another. Close supervision is essential.

Sensory play tables can be filled with sand, water or food for indoor play providing the following requirements are met:

### **Sand Tables**

- Have children and staff **wash their hands** before and after using the table.
- Purchase table sand from a supplier such as a garden centre or toy store. The packaging should state that the sand has been washed and dried and is dust and silica free. Soil is not permitted.
- Discard and replace sand contaminated with human waste.
- Clean area beneath the play table daily. Discard any material that is spilled on the floor. Spilled materials must not be placed back into the sensory play table.
- Keep table covered when not in use.
- Ensure all toys used in the sensory play tables are cleaned and disinfected at least once per week, or more often if required.
- Clean and disinfect sensory play tables at least once per week and more often, if required, following the sensory play table cleaning and disinfecting procedure below.

### **Food Play Tables**

- Have children and staff **wash their hands** before and after using the table.
- Use only dry food materials in play tables. If the food material becomes wet, it must be discarded and replaced.
- Discard and replace food contaminated with human waste.
- Clean area beneath the play table daily. Discard any material that is spilled on the floor. Spilled materials must not be placed back into the sensory play table.
- Discontinue use of food in sensory play tables in the event of a rodent or insect infestation.
- Keep sensory play tables covered when not in use.
- Ensure dry food items used in the play table are kept no longer than a week and then discarded.
- Ensure all toys used in the sensory play tables are cleaned and disinfected at least once per week, or more often if required.
- Clean and disinfect sensory play tables at least once per week and more often, if required, following the sensory play table cleaning and disinfection procedure below.

### **Water Play Tables**

- Have children and staff **wash their hands** before and after water play.
- Use potable (chlorinated or municipal) for water play.
- Individual water play containers are recommended for infants, toddlers and diapered children. Individual containers can be grouped together on the floor to permit children to play together.
- Group water play tables can be used for preschool aged children.
- Choose a tub that is small in size, light weight and easy to handle.
- Choose tubs with smooth, non-absorbent, easily cleanable surfaces.
- Fill the water play tub with clean tap water just before use.
- Change the play tub water at least **ONCE EACH DAY** and more often if necessary.
- Do **NOT** add bleach, vinegar or other disinfectants to the play water when in use.
- Clean and disinfect all toys used in water play tables after each use.
- Cover sensory play tables when not in use

### **Sensory Play Table Cleaning and Disinfecting Procedure:**

- Thoroughly scrub all surfaces of the tub using warm water, soap and a scrub brush.
- Rinse off detergent with clean, clear water.
- Apply sanitizer being sure to follow the manufacturer's instructions. For a fresh bleach solution mix 20 mL of bleach per 5 L of water. For a smaller quantity, mix 4 mL of bleach in 1 L of water.



- Let the sanitizer sit in the tub for the proper contact time (e.g. at least 45 minutes if using a bleach solution).
- Empty the tub and allow it to air dry.

## **SENSORY PLAY TABLES ARE NOT TO BE USED DURING AN OUTBREAK OF COMMUNICABLE DISEASE DUE TO THE RISK FOR DISEASE TRANSMISSION**

### **Craft Materials:**

In order to ensure optimum safety for the children at your day care centre, special consideration must be given to the materials that are being used for crafts. The following recommendations have been established for craft materials:

- Ensure that all materials used for crafts are non-toxic.
- Ensure that toilet paper rolls, egg cartons and trays previously used to store hazardous food items that cannot be properly cleaned and disinfected are not used for crafts (e.g. Styrofoam meat trays).
- Use Styrofoam with caution, it may present a choke hazard for small children.
- Use balloons with discretion. They are the leading non-food cause of choking death in children.
- Discard grains and cereal products after one week of use. If they become wet, discard immediately.
- Discard play-dough after one week of use and after touching the floor.

### **Natural Toys**

Natural toys are considered items that are naturally found in the surrounding environment. Items such as rocks, wood, leaves, etc. are examples of natural toys. For infection control purposes, it is the responsibility of the daycare to assess each item before it is placed in circulation. Items that can be treated as a regular toy should be cleaned and disinfected as so. Items that cannot should be discarded and replaced as needed or used for visual purposes only. Items such as birds nest are not considered a natural toy and should only be used for visual purposes. The best location for natural toys, if used, is outdoors.

The use of natural toys must be declared during an inspection from Algoma Public Health and there use may be left to the discretion of the inspector.

For questions on the use of natural toys please contact Algoma Public Health.

### **Personal Items**

An important aspect of preventing the spread of disease in your child care centre is to ensure that each child's personal items are stored separately from each other and cleaned/changed regularly.



### **Expectations of Operator:**

- Store each child's personal items separately and ensure each item is clearly labeled with the child's name to avoid confusion of ownership.
- Each child should have their own toothbrush and toothpaste, comb and blanket.
- Ensure that if toothpaste is used, that it is dispensed from the container in a manner that will not contaminate the rest of the toothpaste (e.g. don't apply paste directly onto the toothbrush. Use a single-use, disposable wooden spatula to apply toothpaste from tube onto spatula and then onto the toothbrush).

Toothbrushes require special attention. Make sure that toothbrushes are stored:

- Out of reach of children.
- Not in contact with each other.
- Freestanding or on non-porous surfaces that are washed, rinsed and disinfected daily.
- Air dry brushes between each use.
- Discard toothbrush if there is a question of ownership.

### **Laundry**

- Ensure laundered items are washed and disinfected with detergent and  $\frac{1}{4}$  to  $\frac{1}{2}$  cup of disinfectant at a laundry facility.

If your centre is in an outbreak, contact your Public Health Inspector for further direction and assistance.